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Infectious Epididymo-orchitis of Rams Associated with Pasteurella Pseudotuberculosis

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The occurrence of an isolated case of apparent orchitis in rams on hill pasture in Scotland can on occasion be observed, particularly during the months of July and August. The incidence of such cases follows closely that of tick pyaemia and experienced shepherds regard the condition as a manifestation of that disease. The object of this paper is to record the preliminary investigation into the aetiology of an outbreak of infectious epididymo-orchitis in a flock of Black Face rams in the County of Nairn during the month of August.

Clinical Aspects

In each case, the disease was sudden in onset and was accompanied by a marked febrile reaction. In the initial stage, extreme tenderness around the scrotal area was evident, quickly followed by a developing unilateral enlargement. Since the affection appeared simultaneously in a number of animals this suggested that it was about to assume epizootic form. Ten rams were affected in a flock of 200. In a number of instances the disease was fatal. In those cases in which the disease did not terminate fatally, there remained a marked enlargement of the affected testicle, which progressively increased in size with eventual rupture of the scrotum and the discharge of thick purulent material. In the acute phase, the gait of the animal altered, and the affected animals could be recognized easily even at a distance, by the straddling hind leg action. This straddling gait remained a permanent sign. A return to normal appetite and a loss of scrotal tenderness followed the gradual decline of the febrile reaction. It is interesting to note that, in the initial stage, the majority of the affected animals showed only increase in size of the right testicle. Bilateral enlargement was not observed in the early acute stage but, as the condition became chronic, the involvement of both testicles was observed without any febrile recrudescence. There was no evident urethral discharge and micturition caused no apparent discomfort. Lesions were not observed on the penis or on the prepuce. No evidence of tick bite or abrasion of the skin was seen in any of the affected sheep. Fig. 1 shows the typical clinical appearance of the condition.

FIG. 1.—Ram six months after infection.

Post-mortem Findings

GROSS PATHOLOGICAL CHANGES : *Post-mortem* examinations were made on three rams, two that died from the disease and one that was destroyed in the acute febrile stage. In all three rams, lesions were confined to the affected testicle and epididymis. Gross lesions were not observed in any of the organs in the body cavities.

Testis : The tunica albuginea was thickened, markedly congested and covered with numerous fine fibrinous deposits (Fig. 2). On incision, the gland appeared normal in size but congested.

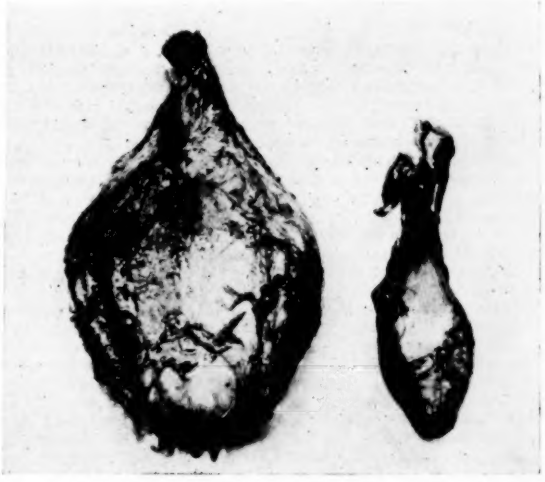

FIG. 2.—Showing infected and healthy testicles removed at the acute stage.

Epididymis : This was enlarged many times its normal size and the normal tubular pattern had disappeared to be replaced by a soft fluctuating mass. The grossly enlarged epididymis completely surrounded the testicle. Incision into this mass liberated a smooth greyish purulent material. This was present in considerable quantity and from each of the three rams examined 200 ml., 300 ml., and 1,000 ml., respectively, of the fluid were collected. Prior to the removal of the fluid the affected epididymis and testicle weighed, respectively, 880 grammes, 960 grammes and 2,115 grammes. Lesions were not observed in the prostate, urethra, ureters, bladder and kidneys.

PATHOLOGICAL HISTOLOGY. Testis : The cellular structure of the seminal tubules was completely altered. The few cells that remained attached to the basement membrane were of irregular outline and possessed coarsely granular cytoplasm. Only a few cells contained nuclei which were faintly stained and in varying stages of karyolysis. The lumina of the tubules were filled with cellular detritus and masses of disintegrated spermatic cells. Hyaline changes were observed in the muscular tissue elements of the blood vessels. Slight perivascular infiltration of leucocytes was observed among the smaller blood vessels and some infiltration with lymphocytes occurred under the tunica albuginea.

Epididymis : The normal arrangement of the tubules was destroyed and replaced with large spaces filled with cellular debris and leucocytes. These areas were surrounded by massive leucocytic infiltration, mostly of the polymorphonuclear variety. Marked changes were observed in the muscle fibres with focal areas of leucocytic concentration. The remaining intact tubules were packed with amorphous material containing numerous leucocytes. The lining cells of these tubules showed early degenerative nuclear changes but there was not any separation from the basement membrane. In the amorphous mass, spermatozoa could be seen in various stages of disintegration.

PATHOLOGICAL SUMMARY : The pathological lesions showed that the disease originated in the epididymis whence it extended

to the testis. From the gross and microscopical appearance it seems reasonable to classify the condition as a suppurative epididymo-orchitis with diffuse fibrinous periorchitis.

Bacteriology

Morphological Studies

Gram-stained films of purulent material from natural cases contained numerous Gram-negative cocco-bacilli with some long bacillary forms. In the coccoid forms bipolar staining was conspicuous in films stained by Loeffler's methylene blue.

Nutrient agar slopes were found to contain coccal, short ovoid and long bacillary forms of the organism. The latter occurred singly, in pairs and in clusters of five. In broth cultures formation of chains was often observed. In both solid and fluid cultures, staining was sometimes irregular and, in five to seven days' old cultures especially, barred and granular staining was often encountered.

Motility was observed in broth cultures grown at 22° C., but not in those incubated at 37° C.

Cultural Studies

Nutrient agar plates, 48 hours at 37° C. and 22° C., aerobically : about 1 mm. in diameter, round, umbonate, semitranslucent and greyish-yellow colonies ; organisms easily suspended in saline solution. Cultures at 37° C., tended to form rough colonies with an irregular surface and crenated edge and did not form completely homogenous suspensions in saline solution.

Horse blood agar plates, 48 hours at 37° C. and 22° C., aerobically : colonies similar to those on nutrient agar plates but non-haemolytic.

MacConkey plates, 48 hours at 37° C. and 22° C., aerobically : small, transparent, colourless colonies with diffuse change of colour of the medium to light yellow.

Deep gelatin, 48 hours at 22° C., good filiform growth without liquefaction.

Nutrient broth, 48 hours at 22° C., aerobically : uniform turbidity with slight deposit that disintegrated on shaking ; later, there was a heavy flocculo-membranous deposit.

The preceding descriptions apply to cultures obtained from the affected testicles and epididymes of three rams, all of which cultures were obtained in pure state from natural material. For further identification only one of these strains, designated strain " X," was used.

Biochemical Studies

The fermentation reactions were tested over a period of seven days at 37° C., in peptone water containing 1 per cent. of each carbohydrate and with bromothymol blue as indicator. Acid without gas was produced in rhamnose, glucose, galactose, mannose, sucrose, trehalose, maltose, aesculin, glycerol, mannitol and salicin. Neither acid nor gas was produced in arabinose, lactose, raffinose, starch, dextrin, inulin, dulcitol, sorbitol and inositol.

Litmus milk : was only slightly alkaline after seven days at 37° C. Indol and Vosges-Proskauer reactions were negative. The methyl-red test and the methylene-blue reduction were positive. Nitrates were reduced to nitrites and ammonia produced in peptone water. The production of hydrogen sulphide could not be demonstrated. Catalase was produced.

Final *p*H in 0·05 per cent. dextrose broth (after seven days at 37° C.) was 6·8. The *p*H of the broth before inoculation was 7·0.

Bile resistance : Good growth occurred in a medium containing 1 per cent. of bile, poorer growth in a medium containing 10 per cent., whilst growth did not occur when the medium contained 40 per cent. of bile.

Serological Studies

The antigenic relationship of three strains of *Past. pseudotuberculosis* of different serological groups obtained from the National Collection of Type Cultures was tested by agglutination and by agglutinin-absorption. For this purpose, the following strains were used : No. 2402, group 1, type B ; No. 1779, group 2, type B and No. 2200, group 3. Antisera were prepared against strain " X " and also against two N.C.T.C., strains Nos. 2402 and 1779 by the following procedure. Rabbits were inoculated intravenously with 5 ml., of broth culture, killed by heat at 60° C., for one hour, two inoculations being given per week for a period of two weeks. Then, living 24-hours broth cultures were similarly injected in a dose of 1 ml., of various dilutions, starting from 1 : 100,000 until a final dose of 5 ml., of undiluted culture was administered. The living cultures were given three times per week.

For the agglutination test the suspension used was the living growth from 48-hour agar slope cultures at 22° C., which were washed in saline and standardized to tube 5 of Brown's scale. The agglutination tests were put up in the usual way, incubated overnight at 37° C., and allowed to stand for two hours at room temperature before they were read. Each serum was tested against strain " X " and the three N.C.T.C., strains of *Past. pseudotuberculosis*. Table I shows the readings obtained with this agglutination test. In this way was demonstrated an antigenic relationship between strain " X " and N.C.T.C., strain No. 2402 which belongs to serological group 1B. In cross agglutination tests those two strains gave the same titre (1 : 1,280). The two other N.C.T.C., strains, Nos. 1779 and 2,200, gave a much lower titre with serum prepared against strain " X."

Table I

Agglutination Reactions

Antiserum	Suspension tested	Agglutination titre
1779 (2B)	1779 (2B)	1 : 2560
	2402 (1B)	1 : 80
	2200 (3)	1 : 40
	" X "	1 : 40
2402 (1B)	2402 (1B)	1 : 1280
	1779 (2B)	1 : 40
	2200 (3)	1 : 20
	" X "	1 : 1280
Our strain " X "	" X "	1 : 1280
	2402 (1B)	1 : 1280
	1779 (2B)	1 : 320
	2200 (3)	1 : 640

For agglutinin-absorption tests N.C.T.C., strain No. 2402 and strain " X " were grown on nutrient agar for 48 hours at 22° C. and washed off with saline solution. A heavy suspension, containing about 100,000 millions of organisms per ml., was used for the test. 0·5 ml. of this suspension was mixed with an equal quantity of antiserum, diluted 1 : 20, and the mixture incubated for four hours at 37° C. when it was centrifuged. The supernatant fluid (representing a dilution of 1 : 40 of antiserum) was set up against suspensions of the homologous and of the absorbing organisms. Table II summarizes the results. The close antigenic relationship between strain " X " and N.C.T.C., strain No. 2402 was confirmed by absorption experiments.

Table II

Absorbed antiserum	Titre after absorption against strains	
	2402	" X "
2402 *serum* (*titre* 1 : 1280)		
Absorbed with 2402 strain ...	0	0
Absorbed with " X " strain ...	0	0
" X " *serum* (*titre* 1 : 1280)		
Absorbed with " X " strain ...	0	0
Absorbed with 2402 strain ...	0	0

Experimental Pathogenicity

Rabbit : Intravenous inoculation of 1 ml. of 24-hours broth culture caused death in less than 48 hours. The *post-mortem* picture comprised enlargement of all the lymphatic glands and the spleen, congestion of visceral organs and marked haemorrhages in the mucosae and serosae. Large numbers of cocco-bacilli were present in films from the spleen, liver and lungs and blood-culture was positive.

Guinea-pig : Intraperitoneal injection of 1 ml. of 24-hours broth culture killed the animal in less than five days. *Post-mortem* examination revealed that the peritoneal fluid was slightly viscid and contained flakes of fibrin. Microscopical examination showed the exudate to contain large numbers of cocco-bacilli.

Mouse : Intraperitoneal inoculation of 0·5 ml. of 24-hours broth culture caused death in less than eight days, with lesions similar to those encountered in the guinea-pig.

Albino rat: Subcutaneous inoculation of 1 ml. of 24-hours broth culture did not cause any illness and, after three weeks, the creature was killed but the *post-mortem* examination did not reveal any gross lesions.

BACTERIOLOGICAL SUMMARY

The cultural, biochemical, serological and biological findings strongly suggest that strain "X" should be grouped with *Past. pseudotuberculosis*. In particular, the serological studies indicate that strain "X" is closely related to N.C.T.C., culture No. 2402 which belongs to group I, type B. (Schutze, 1928).

DISCUSSION

The character of the organism "X" indicates that it should be grouped with *Past. pseudotuberculosis* which produces infectious disease in rodents and birds. In other animals this organism has been reported only rarely and sporadically. According to Boquet (1937) *Past. pseudotuberculosis* has been found in the guinea-pig, rabbit, cat, hare, ox, goat, horse, monkey and man. Truche (1938) identified a strain of *Past. pseudotuberculosis* isolated by Gilruth from sheep in Australia. Recently Wramby and Fredrieson (1941) described *Past. pseudotuberculosis* in the pig. As far as the authors are aware no records of *Past. pseudotuberculosis* infection in sheep can be found in the literature except Truche (1938). On the other hand, an organism, which differs in several respects from *Past. pseudotuberculosis*, but which corresponds more closely with *Past. septica*, was isolated from sheep by Hindmarsh (1931), by Dungal (1931), by Pullar (1932) and by Beveridge (1937). Our case of infection of the testicle with *Past. pseudotuberculosis* appears to be the first on record. It was not possible to obtain any epidemiological evidence that would throw light on the aetiology of these cases but it is of interest to note that the incidence of sporadic cases concurred with periods of tick activity so that the possibility of vector transmission in those cases would appear to be worthy of further investigation. The outbreak under discussion occurred when tick activity was marked during July and August though no ticks or tick-bites were observed. Again, *Past. pseudotuberculosis* is widely spread among wild rodents. When, in 1937, a few cases of tularemia were reported in some European countries, one of the authors (M.A.S.), examining bacteriologically large numbers of carcases of wild animals, found a high percentage of hares infected with *Past. pseudotuberculosis*. The possibility of spread from these animals to sheep cannot be ruled out. The apparently predilective locus of infection is also worthy of note.

Summary

1. A disease condition of rams of a type hitherto apparently unrecorded is described, occurring in the County of Nairn.

2. From the pathological and bacteriological examination of three typical cases, the condition was designated Infectious Epididymo-orchitis.

3. On cultural, biochemical, serological and biological grounds the organism associated with the disease is classified as *Past. pseudotuberculosis*.

Acknowledgments.—The authors are indebted to Messrs. MacLennan & Riggs, of Inverness, for the opportunity to investigate the disease, to Dr. J. Russell Greig and Professor J. W. Emslie for their interest in the work and to Mr. J. Robertson, A.I.M.L.T., for his technical assistance.

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Weekly Wisdom

"*Many distinguished physicians have emphasized the importance of the art of medicine, that subtle attitude towards disease which almost defies description in speech or writing. Others have sought to bring medicine into line with other sciences. One or other view has predominated according to the trend of the time. To-day, the pendulum has swung vigorously towards science, and 'the art' is almost in danger of eclipse. The greatest need of medicine to-day is that the balance should be restored. Nevertheless, this is no simple process. It is not merely a question of less technicality and more clinical observation. The entire outlook must be changed.*"
—DOUGLAS GUTHRIE, M.D., F.R.C.S., "Medicine: Art or Science?" (Wood Jones Lecture, 1947).

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After considering a report on the humane slaughtering of sheep, Doncaster Borough Council propose to pass a resolution that the electrical stunning method must be used when sheep, ewes, wethers, rams and lambs are slaughtered.

Artificial Insemination in the U.S.A.

By

SIR FRANK WARE

I have been asked to contribute a short note on the progress which has been made in artificial insemination work in the U.S.A.

I should explain that my recent tour in connection with this subject did not cover more than a small part of the States: in fact, it was confined to New York State and the neighbouring States of New Jersey and Connecticut, but my information is that it is in the north-eastern part of the country that most progress has been made in this subject, so I believe the institutes and farms which I was privileged to visit will provide a good cross-section of the whole.

These included Cornell University, Ithaca, and a commercial dairy (Holstein) herd maintained by Governor Dewey at Pawling, New York State; Rutgers' University, New Brunswick, and a commercial dairy herd owned by Mr. Rowe B. Metcalf, Judd's Bridge Farm, New Milford, Connecticut.

To give a general idea of the extent to which this method of insemination has caught on in the States, the following figures were collected for the past year:—

New York State	110,000 cows
Wisconsin State	240,000 ,,
New Jersey State	70,000 ,,

New Jersey is one of the smaller States, but even this comparatively small figure represents 16 per cent. of the total cow population of the State.

In privately owned herds it is now customary to adopt this method as the sole agent for reproduction, and I was informed that no animal below four years of age in Mr. Metcalf's herd had been produced by natural methods. In fact, the premier bull (Lord Harry) in this herd is said never to have served a cow naturally.

The same applies to Governor Dewey's smaller herd at Pawling, where artificial insemination has been practised for the past two years, during which period 87 per cent. of pregnancies have been obtained—better results than formerly, when natural methods were used—and the calves are quite indistinguishable from those of former generations. In fact, I saw some calves in Mr. Metcalf's Brown Swiss herd which would do well in any company. This herd, which is under the very capable management of Mr. De Voe, has reached a high standard of all-round excellence, and Mr. De Voe attributes this very largely to the astonishing hardiness in constitution possessed by this breed—a point of great importance to breeders when so much emphasis is being placed on the necessity for increased production. Of the three breeds which were in existence when the present system of management was introduced 17 years ago, one, the Ayrshire, has been discarded altogether; another, the Jersey, has dwindled to a small nucleus only; while the Brown Swiss has continued to thrive and increase in numbers.

Visits to the Cornell and Rutgers' Universities provided an opportunity of studying different methods of collection and distribution of the seminal fluid. At Cornell great stress is laid on the necessity for central control and the herd of bulls maintained at the Central Station at Ithaca numbers over sixty. Of these 75 per cent. are Holstein and the remainder Jersey, Guernsey and Ayrshire.

The case for central control is that this enables better supervision to be exercised over the quality of the fluid distributed, and for the bulls to be handled by specially trained and experienced staff, who understand the psychology of these animals.

The story was told of one officer in charge of a local collecting centre who was seen using the artificial vagina as a goad to a reluctant bull, with the result that this bull in future showed a distaste for this apparatus as soon as it was produced. It is said that many of the bulls at Ithaca wait for the adjustment of the artificial vagina before attempting to ejaculate.

At Ithaca stress is also laid on the routine washing of the lower parts of the body and sheath before service with a weak warm chlorine water, partly for cleanliness and partly to stimulate interest. The temperature of the water jacket is taken with a thermometer and not by relying on the operator's fingers!

Bulls are not called upon for service more than once a fortnight at this Institute, but at other centres once a week is not considered too frequent. Between services they are fed a well-balanced diet, with emphasis on the necessity for an ample supply of vitamin A, and exercised regularly, either in an open paddock or on a mechanical roundabout, which takes five bulls at a time, driven by a small motor.

One disadvantage of centralization is that it results in some waste of seminal fluid. This is sent daily to the 95 local centres at present functioning in New York State and any which is not used in four days is discarded. Most samples are used within 48 hours of collection, and positive results have been obtained up to 12 days.

New Jersey States does not practise centralization largely for geographical reasons, for it would be difficult to arrange quick transport to all parts of the States from a central station located at Rutgers. Three breeding centres, each maintaining a small herd of selected bulls, have therefore been set up in this State, from which distribution is made by car and the results are said to be quite satisfactory. Decentralization seems to permit of more attention being paid to the type of bull selected for use at the collecting centres and this, in my view, is a very great advantage. With the introduction of this method of breeding amongst small-scale farmers, these men will, in future, select the bull for their herd on the basis of pedigree and lactation records only and will rarely have an opportunity of seeing the animal itself. While elimination of "show points" as a measure of estimating an animal's value to the dairy industry will cause no concern to the majority, any diminution in the high standard of general conformation, which usually goes with them, is to be deprecated.

It is, in my view, obligatory on the authorities in charge of collecting centres to see that the selected bulls are able to throw progeny which are capable of performing efficiently all the normal physiological processes of an animal, besides milking.

Aside from the subject of artificial insemination, I saw an interesting experiment in the management of a dairy herd at Pawling. This herd is stabled on what is known as the "pen" system, which is merely an adaptation of the English system of wintering bullocks, and the cows are allowed to remain loose throughout the 24 hours.

At milking time they are taken into a specially constructed room, which is so arranged that the men operating the machines stand at a lower level than the cows, so that the machine can be attached to the udder more easily and stripping done more readily. The whole system has been introduced for the prevention of mastitis, which is said to have been much reduced in this herd.

I must finish this note by expressing my great indebtedness to all those officers at the various Institutes which I visited, who gave so much of their time to showing me the valuable work upon which they are engaged.

Veterinary Education in the U.S.A.

By

SIR FRANK WARE

During a recent visit to the U.S.A., I spent a most enjoyable and instructive day with Dr. Hagen, the Dean, and some of his staff at the College of Veterinary Medicine, Cornell University, and as veterinary education is one of the major subjects under discussion by the profession in this country at the present time, it may be of interest to record a few impressions of that visit.

The College has the advantage of being placed in rural surroundings. Ithaca, where the major part of Cornell University is located, is in the midst of a large dairying district in New York State, and in addition to the Veterinary College, other colleges for agriculture and animal husbandry, engineering, physics, etc., are all housed on the same site. Students of the Veterinary College, therefore, have the advantage of living and mixing with students in other faculties, and are able to take a full share in the cultural and recreational life of the university.

In the course of a short stay it was, of course, not possible to visit all the sections of the College, but I was particularly impressed with the way that the subject of Parasitology is taught at Cornell. Every effort is made to keep the subject alive and advantage is taken of the very well-equipped "movie" picture department of the University to provide both the student and the farmer, by this method, with the latest information regarding animal pests. The extension of this method of demonstration to other departments and other teaching institutions could not fail to help veterinary students learn their subjects more quickly, and time is such an important factor in our over-crowded curriculum.

The main subject for dissection in the Anatomical Department at Cornell is now the dog, and I was given to understnand that this example is being followed by other veterinary teaching institutions in the States. My reaction to this innovation is that from the political viewpoint it is not to be recommended. The advantages of using a small and easily acquired animal for dissection purposes are obvious, but I have seen the profession suffer a great deal by reason of retaining the horse for so long as the main dissection animal, which gave our opponents the opportunity of describing us as mere equine specialists. Now, if the dog is substituted for the horse, our latest position will be worse than the first. It cannot be too frequently reiterated that the future of the veterinary profession in any country lies in its ability to maintain the health and increase the productiveness of the ruminant animals, particularly cattle, and these animals, therefore, should form the basis of our teaching in anatomy and physiology.

When one introduces the subject of associating research with teaching, at a veterinary teaching institution, it seems inevitable that the question of training the practitioner will be raised. Lecturers appear to be encouraged to pay so much attention to this side of the profession that they have little time for the accumulation of scientific data and one gets the impression that "training a practitioner" and "educating a scientist" cannot follow the same lines. Yet it was admitted freely at Cornell, and, I believe, will be in European countries also, that there is a growing demand for a veterinary practitioner who can give good advice regarding the general management of livestock as well as their treatment, and, of course, in such countries as India and the Colonies and in a mechanized army, the demand for veterinary practitioners of the old type is very small indeed.

So why not meet this new demand boldly and determine in future to turn out from our veterinary colleges the complete Animal Scientist?

Taking the important subject of Animal Physiology as an example of the present position, I found that the major investigational work in this subject at Cornell is carried out in the College of Agriculture and not in the College of Veterinary Medicine, and until this position is reversed veterinary graduates, as a whole, will not be endowed with that outlook which would make it an axiom that they would be the first choice when investigational or development work of any kind connected with the domestic animals is contemplated. I once heard the late Sir Arnold Theiler at an important conference propound this maxim, which was received with the greatest approbation by all present, friend and foe alike, but I have sometimes thought that he might have added that it is up to the veterinary profession to see that, before making this demand, the curriculum at their teaching institutions is arranged so that there can be no question of the superiority of the veterinary graduate in all matters relating to the domestic animals. This, unfortunately, is not always the case at present.

THE DOMESTIC CAT AND NEUROTROPIC VIRUSES

In a letter published in *The Lancet* of May 31st, Dr. W. N. Rogers, of Epsom, recalls the suggestion made, in the leading article on lymphocytic meningitis appearing in its issue of April 12th, that in the study of the source of infection of virus diseases the domestic cat might repay investigation, and continues: "In 1937 I published in *Sperimentale* (**91**, 3) a paper on spontaneous encephalitis of cats as a possible source of infection in a human case.

"This was the result of investigations, carried out at the pathological department of the University of Florence, following the observation of a sporadic case of encephalitis of the lethargic type in a middle-aged woman. A cat belonging to this patient had shown signs of ill health and varied nervous symptoms for many months. Histological examination of its brain revealed moderate degree of infiltration of the leptomeninges and choroid plexuses. Degenerative and proliferative changes were found in the nuclei of the base with infiltration in the ependyma of the lateral ventricles and around the blood-vessels. Perivascular infiltration and degenerative changes were seen in the spinal cord.

"A filtrate from this brain was injected intracerebrally into three cats. One showed definite changes in the nervous system which were not found in its twin kept as a control. The results in another were of uncertain significance. The third showed areas of focal infiltration and necrosis near the lateral ventricles, perivascular cuffs, and infiltration in the ependyma; but similar changes were found in its mother and a twin examined as controls, as well as in two other controls. No abnormalities were seen in the brains of three cats inoculated with filtrate of normal brain of a cat or in twelve normal controls. The results of bacteriological investigations were inconclusive.

"It was suggested that cats are liable to be infected with neurotropic viruses and may therefore act as a reservoir from which the infection could be transmitted to human beings.

"The number of animals species known to be affected by various virus diseases is increasing, and much has recently been learnt on the links between man and animal infection. The cat appears to have been strangely overlooked in these studies. Dr. G. H. Jennings in his paper of April 12th states that many homes from which his patients were coming had cats. It may well be worth examining some of these cats, and generally paying more attention to this animal."

CLINICAL COMMUNICATION

Cardiac Disease in Dogs and Cats Treated with Vitamin E

By

N. H. LAMBERT, M.R.C.V.S.,

DUBLIN

The treatment of coronary heart disease with "Ephynal" (d-l Alpha tocopheryl acetate) was first reported by Vogelsang and Shute (1946). They noticed that those purpuric patients under treatment with vitamin E who also had heart lesions were very much improved. This suggested an extension of the work, so clinical trials were instituted and a publication by Vogelsang, Shute and Shute (1947) followed.

Cases were treated with high dosage of vitamin E, and all patients in the series having anginal pain showed a great reduction in its severity or its complete abolition. Exercise tolerance was increased, oedema disappeared and all patients had an increased feeling of well-being.

The possibility of using this form of treatment for dogs and cats suggested itself to me and a series of cases was embarked upon. Details from some of these are given below.

CASE 1

Eleven-year-old Griffon bitch dying after weeks of treatment for metritis and endocarditis. The metritis had improved but the heart was rapidly becoming worse. The owner implored me to try anything to save the bitch's life. The report of Vogelsang & Shute (1946) on vitamin E came to mind, so I decided to try this treatment, though the bitch was having frequent heart attacks, was almost too weak to stand and had to be hand-fed with liquids, and was very wasted. "Ephynal" 3 mgm. was given *t.i.d.* After the first day a slight improvement was noticed; this improvement was maintained and in 14 days the dog was running round again looking for food and barking. Her owner stated that she was younger in her ways than for the past three years. She is now in perfect form. The result was spectacular. She received two tablets daily for a month and is still on one tablet daily nearly 12 months after treatment started. She is rejuvenated, plays like a pup, has a fine glossy coat, and has had her first normal heat for four years, followed by a phantom pregnancy.

CASE 2

Twelve-year-old Cocker bitch. When seen she was off food, very weak, and preferred to sit up instead of lying down, a common position for dogs with cardiac lesions. She was an advanced case of endocarditis. One 3 mgm. "Ephynal" tablet was given per os *t.i.d.* for 14 days, then *b.i.d* for a further 14 days, and finally one tablet was given daily for a further 14 days. This bitch made a remarkable recovery; improvement was noticed after a few doses. She coughed less, lay flat and was feeding well on the second day. Now the owner says she is younger in her ways than for the past five years. She is still in good health six months after discontinuation of treatment.

CASE 3

Twelve-year-old Fox Terrier dog. This animal had been coughing and showed a disinclination to go for walks for some weeks. When first seen he was very weak, refusing food, and on examination was obviously an advanced case of endocarditis. He was given one 3 mgm. "Ephynal" tablet *t.i.d.* for 21 days, then 1 *b.i.d.* for 14 days, and finally one daily for one month. The dog improved slowly, and the owner now reports that it is rejuvenated and playing like a pup. He has not been examined since November, when he appeared to be in normal health.

CASE 4

Ten-year-old Cocker dog. Brought for consultation because of anal abscess; a chronic cough was also mentioned. On auscultation endocarditis was easily detectable. The abscess was treated by usual methods and "Ephynal" treatment instituted. The cough cleared in a week. Again the owner reported that the dog was rejuvenated.

CASE 5

Eight-year-old Red Setter. This dog had a large anal adenoma which was reacting to treatment with stilboestrol. The owner wanted to keep using the dog for shooting, which was permitted. Six weeks later he was brought in again. He was very wasted, coughing a good deal, very distressed, and the owner reported that the dog had collapsed several times whilst out shooting. Examination revealed advanced endocarditis and cardiac dilatation. One 10 mgm. "Ephynal" tablet was given *b.i.d.* per os for 14 days and then one tablet daily for 21 days. An immediate improvement was noticed by the owner. A week later the dog had put on a little condition, was in good form and breathing normally. Gradual increase of diet and exercise was advised and "work" forbidden. Stilboestrol treatment was continued throughout as the anal growth was diminishing. When examined three weeks later a big improvement was noted and the amazing thing was that the owner said he had just returned from giving the dog three days' shooting and he was nearly as good as ever.

CASE 6

Eleven-year-old Yorkshire dog, having heart attacks and also suffering from deafness and defective vision. Auscultation revealed advanced endocarditis and myocarditis; one 3 mgm. 'Ephynal" tablet was given three times a day, and although improvement was slow, after a week the tablets were reduced to twice daily. Three weeks later he was much better, the heart attacks had ceased and his sight and hearing were improved. He was also less nervous. The owner said that the dog was in better health than for the past 12 months. Treatment was discontinued, and within a few days the dog relapsed slightly. He began to cough, appeared distressed, and again slightly deaf. Treatment with "Ephynal" tablets was again instituted and the symptoms abated. He is now on one tablet daily and is in marvellous form four months from the commencement of treatment.

CASE 7

Sixteen-year-old neuter cat. This animal collapsed in what appeared to be a heart attack. It had a very rapid and weak pulse, and staggering gait on mounting two steps. It was given one 3 mgm. "Ephynal" tablet for a week *t.i.d.*, then *b.i.d* for a week and finally one tablet daily. The cat made a remarkable recovery, has developed kittenish habits and looks younger than it did five years ago. It is still on one tablet every second day, three months after beginning of treatment.

So far about 50 cases have been treated with "Ephynal" and practically all show considerable improvement in their cardiac and general condition. Evidence of endocarditis remained after treatment, but a considerable improvement was noted in the strength of the heart beat.

DISCUSSION

The question of the possible mode of action of vitamin E in these cases has, naturally enough, engaged my attention, and this point is also raised in the *British Medical Journal* (1946). The *B.M.J.* expert, replying to a question on vitamin E in auricular fibrillation, says: "Apart from the Canadian claims on which this question is based, reasons for testing vitamin E in the treatment of certain forms of heart disease might have been inferred from the results of animal experiments, since muscular lesions, sometimes accompanied by degeneration of the nerves, are a prominent feature in avitaminosis E." Also pointed out is the fact that in the rat the E deficiency is characterized by the deposition of dark brown pigment granules which, when examined histologically, appear to be identical with those seen in brown atrophy of the senile human heart.

It is interesting also to note that Govier, Yanz and Grelis (1946) suggest an explanation for a possible biochemical lesion in congestive heart failure. They propose that chronic anoxia might produce a defect in the intracellular linkages of alpha-tocopherol so that a relative E deficiency may be produced in the same way that co-enzyme deficiencies are produced in tissues in shock (Govier, 1944). In congestive failure cardiac muscle is known to have a low creatine level as also is E deficient muscle. This might suggest avitaminosis E in both cases. (Houchin *et al.*, 1942; Herrman *et al.*, 1936, 1943). This relative deficiency might then allow functioning of co-enzyme I nucleotidase in a system already anoxic, resulting in the breakdown of co-enzyme I, which is known to occur in heart muscle (Govier, 1945). The co-enzyme I breakdown might lead to damage to heart metabolism. Alpha-tocopherol could be expected to preserve cozymase by the inhibition of cozymase nucleotidase. This would allow of a more normal metabolism.

Observing the rejuvenation in most cases, the action of vitamin E on the gonads must also be considered.

Further, work on cardiac failure in cattle on vitamin E free rations and controlled by electro-cardiograms reported by Gullickson & Calverley (1946) shows that a considerable number of animals fed on a vitamin E deficient diet died suddenly, and although there was no evident cause shown by *post-mortem* examination, the manner and suddenness of the deaths suggested that the heart was involved. One case mentioned in particular of a heifer, whose dam and sire were both raised on vitamin E free rations, as was the

heifer itself, showed by E.C.G. a decreased functional activity of the myocardium in the terminal stages of the deficiency, as indicated by the decrease in the potential of the deflection of the Q.R.S. complex and by the increase in duration of the P.-R., Q.R.S. and Q.-T. intervals.

At the time of writing the authors say "Microscopic studies of heart sections, especially involving the Purkinje network of this and other animals in the study are being made. It can be stated, even though this work has not been completed, that definite abnormalities have been noted. Atrophy and scarring of the cardiac muscle fibres is clearly indicated. An increase in cellular elements is noted, in some instances strikingly resembling, though smaller than, the Aschoff nodules seen in human endocarditis."

Summary

The treatment of cardiac disease in dogs with "Ephynal" (Alpha-tocopherol) is described.

Histories of seven cases are given. All animals in this and subsequent series made a good recovery.

From the published literature an attempt is made to explain the mode of action of vitamin E in cardiac disease.

Acknowledgment.—I am grateful to Roche Products, Ltd., for their co-operation and assistance.

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ABSTRACTS

[I.—Salmonellosis in Swine. Hayston, J. T.; **II.—Swine Dysentery.** Gorrie, C. J. R. (1946.) *Austr. vet. J.* **22.** 132-135 and 135-138.]

I.—Salmonellosis of swine is a most serious epizootic, destroying almost the entire herd within a few weeks, or, in the more insidious chronic form, causing great economic loss by its check on growth and fattening. It is introduced into the piggery usually by fresh purchases, which have not been kept in quarantine, although occasionally it appears spontaneously in self-contained piggeries. The reservoir of infection is the sick or healthy carrier. About 10 per cent. of normal pigs are said to be carriers. Infection probably takes place through the mouth, entering the blood stream *via* the intestinal lymphatics. Pigs of all ages become infected, but the greatest mortality occurs in the group aged from two to four months.

The sick pig may be recognized by its dejected appearance, poor condition, loss of appetite and temperature rising to 107° F. There may be discoloration of the skin, discharge from nose and eyes, and keratitis. Involvement of the lungs brings about the usual pulmonary symptoms. Towards the end of the infection there may be yellowish watery diarrhoea. Increasing weakness and staggering gait precede death.

Post-mortem features vary with the course of the disease. In the pulmonary infection there is pneumonia of apical, cardiac and diaphragmatic lobes, and there are usually miliary or larger abscesses scattered throughout the pneumonic tissue. Skin lesions take the form of punctate or larger haemorrhages, areas of venous congestion, abscesses or ulcers. The classical lesions of necrotic enteritis are not common in New South Wales, possibly due to the fact that there is no deficiency of nicotinic acid in the food. Rarer manifestations of the disease are arthritis, osteomyelitis and suppurative conditions of the spinal cord.

Diagnosis depends on laboratory examinations for the causal organisms. This is the only method of distinguishing from swine fever, swine erysipelas, and, in the skin conditions, from swine pox. (The laboratory methods described are those commonly used in this country.) The organisms concerned in the infection in New South Wales are *Sal. cholerae suis var kunzendorf, Sal. typhimurium,* and rarely, *Sal. bovi morbificans.*

Control of the disease depends on improving the standards of feeding and hygiene, destruction of sick animals and segregation of contacts. The enteric infections may be treated with sulphaguanidine. It must be remembered in dealing with outbreaks that the salmonella species involved are potentially pathogenic for man.

II.—Gorrie describes a disease, distinct from the preceding, which he calls swine dysentery, and which affects chiefly the caecum, colon, rectum and stomach, and very rarely the small intestine. At first there are congestion of, and haemorrhages into, the colonic mucosa and later there is abundant blood-streaked exudate. Diphtheritic plaques are found on the surface of the mucosa. In the terminal stages, necrotic and ulcerative lesions are also present.

Trichomonads are usually found in the bowel contents, but they probably do not invade the wall. *Sal. cholerae suis* is found, but not constantly, and is probably of no aetiological significance. The disease is readily transmissible by contact, and by drenching with large bowel contents. In the experimental cases, salmonellae are sometimes present, sometimes not. Their presence does not appear to have any effect either on the severity of the disease, or on the incubation period. The latter varies from eight days following drenching to 14 days following contact. About 10 per cent. of the experimental swine are naturally resistant to infection.

The infectious agent survives at least 24 hours in the carcase, or in the refrigerator, at 6° C., without any apparent loss of virulence. It is destroyed by heating at 80° C. for half an hour. The existence of the carrier state has been demonstrated in this infection. The aetiology, however, remains obscure

I. W. J.

* * * * *

[Effect on Feline Growth of Heat-processed Foods and Metabolized Vitamin D Milk. Mostyn, H. J. (1947.) *Vet. Med.* **42.** 110-112.]

A ten-year study, involving 900 cats, comparing the results of feeding either raw meat or cooked meat scraps, is described in very general terms, without any figures in support.

In the first series of trials one group of cats was fed two parts of raw meat and one part raw milk and cold-liver oil, while the other group got two parts cooked meat scraps and one part raw milk and cod-liver oil. The cats fed raw meat reproduced homogeneously from generation to generation, and among them abortion was uncommon. The litters averaged five and were well nursed; and the cats were tractable, resistant to infections and to parasites. The cats fed cooked meat produced heterogenous litters and abortion was common, 25 per cent. in the first and 70 per cent. in the second generation. Delivery was difficult and kitten mortality was high; the cats were irritable, dangerous to handle and subject to a wide range of infections; sex interest was reduced and vermin and parasites were abundant. This group did not survive the third generation and then died out.

A group of cats previously fed raw meat was put on cooked meat for six months and thereafter returned to raw meat. Though the females showed no ill effects from their six months on cooked meat their kittens showed many irregularities and the succeeding generations showed abnormalities which declined in incidence for two or three years and then increased again.

Cats of the first and second generations of cooked meat fed groups were returned to a raw meat died; improvement was noted in the second generation but reproductive homogeneity was not regained until the fourth generation.

When raw metabolized vitamin D milk (from cows fed irradiated yeast) was given with raw meat to males they exhibited osseous disturbances, as they did when pasteurized milk was used, but females were unaffected. Young males died after two months and adult makes within ten months. The females fed pasteurized or sweetened condensed milk showed a lower reproductive rate than raw milk fed cats. The dental structure was markedly altered and, as a result of faulty formation of the skull, the jaws were often out of correct alignment.

W. M. A.

REVIEW

["The Honest Rogue." By Malcolm Park. Macdonald, 7s. 6d. net.]

We feel sure that our readers will wish us to welcome the appearance of the new novel, "The Honest Rogue," claiming as it does for author a member of the veterinary profession.

To those who like light reading as a means of relaxation this book is sure to appeal, written in a refreshing, brisk and individual style, holding the reader's interest by its pleasing mixture of mystery, clever characterization and touches of humour. Many of the episodes will have a homely and familiar ring for the veterinary reader and while all will agree with the unusual policeman-veterinarian, Mr. Motherson, in deploring the activities of unqualified persons we doubt whether the majority of our clinicians would agree with him in dubbing fracture of the canine pelvis as "about the most painful damage a dog can suffer" or in his haste to destroy a case of sarcoptic mange on grounds of danger to human health—we also envy him his success in obtaining skin scrapings so rich in sarcopt parasites!

We wish this novel the success it deserves and shall look forward to greeting other works by Mr. Park.

The book is, of course, produced in conformity with war economy standards.

Questions and Answers

The submission of questions for inclusion in this column will be welcomed: they can relate to any aspect of veterinary work. For purposes of record, each question is numbered, and those submitting questions are required to furnish (not for publication) name and address.

Answers to readers' queries represent exclusively the personal opinions of the writers, and criticism of the replies will be appreciated.

All communications should be addressed to the Editor.

The "Second Cleansing"

Q. CCIX.—*A local farmer, native of Ayrshire, has asked me about the "Second Cleansing"—a condition characterized by a blood-stained smelly discharge from the vagina causing an odour to breath and milk about nine days after calving and accompanied by anorexia and wasting. He maintains that the disease is extremely common in Scotland but rare here in Essex. Can you please explain the condition?*

A.—The present writer has always understood the term "second cleansing" to refer to acetonaemia. The fact that a blood-stained smelly discharge occurs probably has no connection with the odour noticed in the breath and milk, being merely coincidental—the uterus having reached the stage of involution which expels any residual discharges from cleansing about the same time as that at which acetonaemia commonly appears. The treatment therefore must follow two distinct lines : (*a*) that for endometritis, and (*b*) that for acetonaemia.

While the aetiology of the latter condition is by no means clear, certain facts seem recognized : the smell in the breath, milk and urine is caused by the presence of acetone in the blood. This in its turn is due to a fatty infiltration of the liver and consequent incomplete break-down of fats, with liberation of acetone. The infiltration is itself due to a lack of lipotropic factors, *e.g.*, the amino-acids choline, cystine and methionine, which render fat labile. It follows, therefore, that the "second cleansing" may be treated by (*a*) glucose intravenously to "burn" the fat ; or (*b*) by the injection of lipotropic factors intramuscularly. The present writer has had much success using choline chloride in doses of 10 grammes in 10 c.c. sterile water intramuscularly on alternate days until three doses have been given.

The optimum dosage of glucose appears to be in the region of four ounces intravenously, followed by four ounces subcutaneously the following day.

The best treatment, however, remains the natural one—grass. The disease does not manifest itself on farms where dried grass is fed, nor after cattle are turned out to grass in the summer.

* * * * *

Antiseptic Agents for Use with Penicillin

Q. CCX.—*In view of the inactivation of penicillin and the asepsis necessary in its use, with which of the popular antiseptics and disinfectants should it be used, in mastitis work?*

Is washing the teats with soap and water, and then a final rinse with clean water, the most efficacious preparatory measure for udder infusion?

A.—The penicillin solution should be prepared, just before it is needed, with sterile distilled water, or sterile normal saline. If used correctly there should be no opportunity for it to come in contact with any antiseptic used which might seriously affect its potency.

The best procedure is to wipe the udder clean with clean, warm water and a sterilized cloth and then to swab each teat separately with cotton wool dipped in methylated spirits or a freshly prepared hypochlorite solution (Deosan, Chloros), special attention being paid to the teat orifice. A second swab with a piece of dry cotton wool will remove any surplus fluid which might get into the teat canal when the penicillin is injected.

PLEA FOR TUBERCULIN TEST INTERPRETATION BY "THE MAN ON THE SPOT"

Welcoming the new, simplified, single tuberculin test, the *Farmer and Stock-Breeder* comments: "Surely it is time that the tests were interpreted on the spot by the veterinary surgeon making the test. How a man in an office can interpret a test better than the qualified man on the spot, passes understanding ; and the time lag now involved is anything up to a month before the results are known to the farmer—a serious matter in view of the danger of infection."

* * * * *

Animals slaughtered in the year ended June 19th last because of outbreaks of foot-and-mouth disease totalled 12,744, and compensation paid was £334,381.

ROYAL COLLEGE OF VETERINARY SURGEONS

Membership Examinations, July, 1947

List of Successful Candidates

(*Continued from page* 346)

London

Third Examination:

Ayre-Smith, R. A. (A)
Betts, A. O. (A) and (H)
Bishop, H. W.
Bowen, D. L.
Bowler, G. T.
Briault, M. O'M. (A)
Bulbeck, Miss E. C.
Chittenden, Miss P. M.
Clark, M. A. (A)
Clover, R. H.
Collings, D. F. (A) and (H)
Collyns, D. J. (A) and (H)
Cooper, R. P.
Craven, J. R. E. (H)
Davey, T. E. L.
David, H. W.
Devonald, L. J. R. (P)
Dick, D. C. (H)
Fox, R. C. (H)
*Frank, C. J.
*Goddard, A.
Hamilton, H. A.
Hardy, R. (H)
Hartley, D. C.
Hickman, S. J. H.
Holt, J. R.
Hopkin, A. E.
Howard, J. W. (P)
Hughes, Miss R.
Ibbetson, Miss J. A. (H)
Montefiore, A.
Morris, R. E.
Multair, T. B.
Muse, H. (H)
Oldham, J. G. (H)
Oura, P.
Owens, E. L. (A)
Pengelly, J. (H)
*Penhale, W. G. A.
Phillips, J. G. (H)
Rhodes, J. (H)
Richardson, J. (P) and (H)
Roberts, L. W.
Robinson, C. E.
Ryde, P. S. (A) and (H)
Siebert, W.
Skyrme, H. P. (H)
Smith, F. R. (H)
Smith, J. E. (P) and (H)
Smithson, T. B.
Spittle, R. J. H.
Stockman, M. J. R. (A) and (H)
Stockwell, Miss V. (A) and (H)
Stratton, John (H)
Stubbins, A. G. J.
Teakle, J. A.
Tebbutt, N. F. (H)
Toosey, M. B. (P) and (H)
Turner, Miss P. J. (P) and (A)
Vaughan, L. C.
*Walker, R. G.
Weaver, Miss B. M. Q.
Whittlestone, J. F. (H)
Whittlestone, P. (P) and (A)
Widrich, Miss S.
Williams, K. R.
*Yeoman, G. H.

* denotes 2nd class honours.
(P) denotes credit in Pharmacology.
(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

Fourth Examination:

†Allen, W. G.
Appleby, E. C.
Barber, H. (Paras)
Berry, M. H.
Biggers, Miss J. M.
Brown, D. H. W.
Brown, F. G.
Chandler, R. L. (Path)
*Coward, T. G.
Cradock, G. J. G.
Curwen, Miss P.
Darbyshire, J. H.
Diffey, S. J. K.
Graves, J. A.
Green, Miss M. K.
Hammond, J. A.
*Harries, G. M.
*Harwood, P. M. A.
Hill, R. B.
Hollands, R. D. (Path)
Hull, Miss B. A.
Ibbetson, Miss M. G. (Path)
Jenkins, David
Jenkins, J. F.
Jones, B. R.
Jones, T. D.
MacMichael, Miss E. M. H.
Murray, D. S.
Nicol, J.
Palmer, A. C. (Path)
Pingrim, F. P.
*Pugh, P. D. S.
Reakes, D. G. W.
Schwabacher, E. N.
Sperber, Miss M. B.
Swarbrick, O.
Tobin, W.
Toovey, J. A.
Young, G. F. P. (Paras)

† denotes 1st class honours.
* denotes 2nd class honours.
(Paras) denotes credit in Parasitology.
(Path) denotes credit in Pathology.

Final Examination:

Ablett, R. E.
Barnett, D. N.
Beattie, W. E.
Betty, R. W. (S)
Boyden, S. V.
Breeze, Miss L. A.
Brown, R. H.
Cross, B. A. (M)
Darcell, C. le Q.
Delfosse, Miss M. L.
Frappell, J. P. (S)
Gilbert, G. H.
Gray, J. E. (S)
Green, K. N.

(*Continued on page* 360)

MINISTRY SALARY SCALES FOR VETERINARY OFFICERS

Resolutions of N.V.M.A. Council and Divisions

Resolution of Council

SPECIAL MEETING, MAY 8TH

The following is but one of a number of Resolutions of Council, N.V.M.A., protesting strongly against the Ministry's salary scales and urging their revision :

" That this Council withdraws its refusal to accept from the Ministry of Agriculture and Fisheries advertisements for official veterinary appointments to the Animal Health Division for publication in *The Veterinary Record* and authorizes their insertion free of charge.

" The Council reiterates its strong protest against the inadequate salary scales imposed, which are unacceptable, and intimates to the Ministry of Agriculture and Fisheries that its views on the position will continue to be conveyed to members of the Association, particularly when any official advertisements of appointments are published in *The Veterinary Record* or other journals."

. . . . .

Resolutions of Representative Societies

ASSOCIATION OF VETERINARY INSPECTORS:

" This annual general meeting of the Association of Veterinary Inspectors, having considered the latest available information concerning salary scales in the Animal Health Division, urges the N.V.M.A. to continue the present conflict by all possible measures short of the withholding of essential Veterinary Services."

. . . . .

SOCIETY OF VETERINARY PRACTITIONERS:

" That the fullest support possible be accorded to the Council, N.V.M.A., in their endeavour to elevate the status of the profession within the Civil Service."

. . . . .

SOCIETY OF WOMEN VETERINARY SURGEONS:

" That this Society, whilst not agreeing with the Ministry's revised scales of salaries, strongly disapproves the scales for women which do not uphold the principle of equal pay for equal work.

. . . . .

ASSOCIATION OF VETERINARY STUDENTS:

Letter from G. E. BROUGHTON, *Hon. Secretary* :—

" At the Christmas Executive meeting the delegates from all the colleges were in favour of complete support to the N.V.M.A. stand in the Ministry dispute. This support was endorsed at the Annual Conference. It is therefore hoped that the members of the Association of Veterinary Students qualifying in the near future will approach the N.V.M.A. before accepting a Ministry position."

. . . . .

Resolutions of Other Divisions

AYRSHIRE DIVISION:

" This Division considers that the Council, N.V.M.A., should receive every support from the branches, divisions and individual members of the Association in any efforts it may make to improve the conditions of service within the Animal Health Division of the Ministry of Agriculture."

. . . . .

CENTRAL DIVISION:

" This meeting of the Central Veterinary Society supports the Council of the National Veterinary Medical Association in deploring the decision of the Minister of Agriculture regarding salaries and conditions of service of Veterinary Officers of the Animal Health Division, Ministry of Agriculture.

" This meeting considers that this attitude is bound to prejudice the future welfare of the livestock industry and the essential increase in quantity and quality of foods of animal origin for the success of which a proper recognition of the status of the veterinary profession is necessary. This Society, the Central Division of the National Veterinary Medical Association, therefore endorses the actions so far taken by the Council of the National Veterinary Medical Association and urges that there be no relaxation in its efforts on behalf of the Veterinary Officers of the Ministry of Agriculture."

. . . . .

EASTERN COUNTIES DIVISION:

" The Eastern Counties Veterinary Society strongly supports the Council of the N.V.M.A. in its efforts to obtain improved status and salaries for the whole-time veterinary officers of the Animal Health Division of the Ministry of Agriculture and Fisheries and urges it to continue to make every effort in its power. This Society fully realizes the great importance of an efficient and contented official veterinary service in future developments of animal health and livestock improvement plans which are so urgently required."

. . . . .

LANCASHIRE DIVISION:

" The Lancashire Division of the N.V.M.A. cordially endorses the action taken by the Council of the Association in support of efforts to secure fair conditions of service for the professional staff of the Ministry of Agriculture and Fisheries and urges the Minister to reconsider his decision which is causing such unfavourable repercussions throughout the Veterinary Profession."

. . . . .

NORTH WALES DIVISION:

" That the North Wales Division wholeheartedly supports the N.V.M.A. in their endeavour to secure from the Ministry of Agriculture an improvement in the status of the whole-time veterinary staff thereof and of the entire profession in consequence."

. . . . .

ROYAL COUNTIES DIVISION:

" The Royal Counties Division of the National Veterinary Medical Association places on record its full support of the N.V.M.A. in its efforts to improve the status and salaries of the whole-time veterinary staff of the Ministry of Agriculture and Fisheries.

" This Division wishes to stress the great importance to this country of an efficient and contented official veterinary service."

. . . . .

SOUTH-EASTERN DIVISION:

" That this meeting of the South-Eastern Veterinary Association expresses unanimous support of the action of the Council, National Veterinary Medical Association, in urging upon the Ministry of Agriculture the immediate necessity of raising the salaries of their Veterinary Staff to a level in accordance with the status appropriate to a professional body."

MINISTRY OF AGRICULTURE'S ADVERTISEMENT FOR RECRUITMENT OF VETERINARY STAFF

N.V.M.A. Statement

In response to the Association's intimation that, despite its rejection of the terms offered, it would accept an advertisement from the Ministry for the recruitment of veterinary staff, the official announcement is published on another page. The advertisement intimates only the superficial conditions affecting the basic veterinary inspector grade and does not give emphasis to the provincial salary scale of £520 to £960, which is that applicable to the majority of veterinary inspectors. Nor is it brought out that the scale mentioned in fact includes a bonus of £90 and that the consolidated salary scale is only £420 to £840.

As we have previously indicated, a young veterinarian entering the service at age 25 will be 42 years of age by the time he attains the maximum stipend of a V.I.—£840 per annum or £960 including bonus. Long before that time he will have discovered that his bonus payments have been swallowed up by the cost to him of having to remain completely mobile. Even the sugar coating to the pill in the form of "a reconstruction competition" does not brighten the long-term prospects of the entrant over 25 years of age. That this disillusionment is factual is indicated by the number of voluntary resignations from the service—at least 60 since 1942. This is a high proportion from a total service of approximately 340 and clearly indicates that the veterinary personnel of the Animal Health Division is by no means satisfied with prevailing conditions.

It is no wish of the N.V.M.A. to impede progressive measures for the control of animal health—indeed, the Association has taken the lead in striving for the active adoption of such measures—but it is convinced that they can only succeed if the veterinary staff enjoys the proper status to enable the work to be effectively pursued over a long period of years.

In order to carry out our duty to the profession we are publishing, on the opposite page, resolutions of Council, N.V.M.A., and of many Divisions, which indicate clearly that the Ministry's terms are rejected by the profession with almost complete unanimity. Should any individual contemplate applying for one of the posts advertised we would recommend him not only to ponder on these resolutions and on our recently published editorials but to test for himself the extent of the dissatisfaction prevailing within the Ministry's service to-day.

This period of difficult negotiation is not short-lived; it began in 1937, and we would exhort our members to appreciate that this is the testing time in the Association's fight to place the status and service conditions of the Animal Health Division at their proper level. For our part, we regret very sincerely that the Ministry should have made no move to end a highly unfortunate situation so that their recruiting campaign could have been launched in an atmosphere of goodwill. It is in the best interests of the veterinary profession that the Animal Health Division should be strong and well qualified to lead. The task which lies before the Division can only be accomplished successfully with the support of a united profession. The Minister of Agriculture should take the whole matter into his own hands and act swiftly.

The Council of the N.V.M.A. expects the full support of all members of the profession, not only in this country but wherever they may be stationed overseas, in this fight for the status of the profession. They rely upon members not to apply for—and if without the information which is now made available they have in fact applied, not to accept—posts with the Animal Health Division until a scale of salaries satisfactory to the Association has been formulated and agreed.

SOUTH WALES DIVISION:

"The South Wales Division affirms its full support of the Council, N.V.M.A., in its efforts to obtain improved status and salaries for the whole-time veterinary officers of the Ministry of Agriculture and Fisheries; it appreciates the special circumstances which have led to the decision to offer free advertisement space in *The Veterinary Record* for application for appointment, but it urges forcibly that every effort shall be made to secure a review of the imposed scales at the earliest moment."

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SUSSEX DIVISION:

"That the Sussex Division of the N.V.M.A. regrets the decision of Council, N.V.M.A., to compromise with the Minister of Agriculture, but will loyally support Council in any action which they deem expedient to improve the status and salaries of the members of the permanent staff of the Animal Health Division of the Ministry of Agriculture and Fisheries."

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WESTERN COUNTIES DIVISION:

"The Western Counties Division of the N.V.M.A. appeals to the Minister of Agriculture to revise the current conditions of employment of professional members of the staff of the Animal Health Division on the ground that they are demonstrably unfair to the existing members of the staff concerned and will fail to attract the best type of recruit to the Ministry's service."

(*Continued from page 357*)

Harris, D. G.
Hobbs, D. O.
Hodgson, A. J. (M)
Lewis, D. G.
Loftus, A. C.
Marchant, Miss I. F.
Martin, I. L. (M)
Neave, R. M. S.
Pay, T. W. F.
Penhale, Miss B. M. (M)
Robertson, J. S.
Smith, Miss A. G.
Startup, Mrs. C. M.
Stower, J.
Thomsett, L. R.
Varnbriksha, S.
Vivian, Miss I. P.
Warren, A. L.
Watson, R. T.
Watts, E. T.
Wells, E. A.
*Williams, G.

* denotes 2nd class honours.
(M) denotes credit in Medicine.
(S) denotes credit in Surgery.

Dublin

First Examination:

Dexter, E. d'H.
Lyons, P. J.
McClintock, S. J.
Magee, P. J. H.
*O'Connor, Michael.
Scully, M. A. (B)
White, J. P.

* denotes 2nd class honours.
(B) denotes credit in Biology.

Second Examination (*Old Syllabus*):

McGlinchey, D. E.
Reilly, Raymond.
Walsh, J. T.

Second Examination (*Anatomy (including Histology and Embryology) Revised Syllabus*):

Bourke, P. J.
Clarke, R. R. (credit).
Cox, M. J. A.
Crowe, J. A.
Duignan, E. J.
Fagan, J. A.
Harney, Jeremiah.
Kealy, J. K. (credit).
Kilmartin, V. J. (credit).
Lunny, Kevin.
McAlinden, J. H.
McBride, J. J. (credit).
McDougald, W. L. (credit).
Maher, M. P.
O'Connor, F. M.
O'Connor, J. P. (credit).
O'Donnabhain, S. S.
O'Hart, P.
O'Reilly, M. J.
O'Reilly, J. P. (credit).
Ronan, W.

(*Physiology (including Biochemistry) Revised Syllabus*):

Bourke, P. J.
Clarke, R. R.
Cox, M. J. A.
Doyle, Aidan (credit).
Duignan, E. J. (credit).
Fagan, J. A.
Harney, Jeremiah (credit).
Kealy, J. K. (credit).
Kilmartin, V. J. (credit).
Lunny, Kevin.
McAlinden, J. H.
McBride, J. J. (credit).
McDougald, W. L. (credit).
Maher, M. P. (credit).
O'Connor, F. M.
O'Connor, J. P. (credit).
O'Donnabhain, S. S.
O'Hart, P.
O'Reilly, M. J.
O'Reilly, J. P.
Ronan, W. (credit).

Third Examination:

Barry, J. G.
Beirne, J. P.
Bucklev. Thomas.
Cahill, Patrick.
Coghlan, F. X.
Collins, S. McC. (H)
Connors, Nicholas.
Corr, John.
*Dineen, Charles.
Donovan, D. B.
Fanning, J. J. (A)
Gilchrist, G. M. (A)
Lane, Morgan (H)
Loughran, P. K.
McCarthy, Michael (H)
McClancy, B. N.
McGettigan, J. F.
Mackle, T. A. (P) and (A)
Mahon, Francis (H)
Murdock, C. A.
Murphy, E. C.
Murphy, P. F.
O'Boyle, J. M.
O'Connell, T. J.
O'Kelly, C. D.
Prendiville, D. B. (H)
Rooney, A. M.
Ryan, G. M.
Stephens, H. A. P.
Stephenson, J. A. (A) and (H)
Stewart, Paul (H)
Thornton, T. J.

* denotes 2nd class honours.
(P) denotes credit in Pharmacology.
(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

Fourth Examination:

Byrne, P. F.
Cox, J. R. M.
Dawson, R. M.
Fennelly, P. W. (Path).
†Loughlin, David.
McCauley, P. J.
McGovern, Gregory.
*McIvor, J. G.
McNeill, John.
O'Connor, Daniel.
O'Sullivan, C. G.
Quaid, T.
Stewart, D. J.
*Sweeney, E. J.
Warmington, J. C.
Woods, R. H.
Woulfe, M. R.

† denotes 1st class honours.
* denotes 2nd class honours.
(Path) denotes credit in Pathology.

Final Examination:

Adams, E. K.
Alford, G. A.
Besant, J. B.
Bradbury, Miss J. M.
Brown, Samuel.
Byrne, P. J.
Conlon, P. K.
Corcoran, J. F.
Curtis, R. G.
Dineen, Joseph.
Farrell, T. M.
Forde, L. P.
Gormley, P. D.
Hickey, T. F.
Higgins, J. P. (M)
Keane, Cornelius.
McCarthy, K. J.
McCaughey, R. M.
McGroarty, D. J.
McNamara, E. J.
Martin, Hugh (M)
O'Gorman, David.
O'Neill, J. B.
O'Riordan, John.
*Prendergast, W. J. N.
Shiel, J. C.
Thornton, Edward.
White, D.

* denotes 2nd class honours.
(M) denotes credit in Medicine.

Liverpool

First Examination:

Dawkins, H. P.
Edwards, D. K.
Fleetwood, J. D. L.
*Randle, P. O.
Roddis, A. F (C)

* denotes 2nd class honours.
(C) denotes credit in Chemistry.

Second Examination:

Cunningham, B.
Harbourne, J. F.
King, J. J. (P)
*Owen, L. N.
Taylor, L. A.
Westcott, E. V.
Woodall, H. (P)

* denotes 2nd class honours.
(P) denotes credit in Physiology.

Third Examination:

Bacon, William (A)
Carter, N. S.
Cayless, Miss Barbara (A) and (H)
Cole-Powney, J. H. M. (A)
Cundle, Miss E. C.
Davies, E. L. (A)
Done, J. T.
Earl, N. M.
Errington, A. F. (P)
Forster, P. E.
Forster, Roy (A)
Griffith, Edward.
Grime, P. A.
Hewett, M. J
Hooper, Miss G. M. (A)
Keeble, S. A. (A) and (H)
*Littlejohn, Miss A. I.
Macdonald, J. N.
McGrath, J. F. (A)
Mason, Harry (A)
Morgan, W. J. B. (P) and (A)
Perry, P. F.
Smith, Miss M. B. (A)
Stevens, A. J. (A)
Teer, J. P. (A)
Theobald, C. G. (A)
Whitfield, G. D.
Woodhead, A. T. (A)

* denotes 2nd class honours.
(P) denotes credit in Pharmacology.
(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

Fourth Examination:

Allcock, James.
Field, A. C.
Gee, Miss B. G. (Path)
Greasley, John.
Hague, D. C.
Hargreaves, P. R.
Harrison, W. I. (Path)
Henderson, Miss J.
Hill, K. J. (Path)
Hughes, E. J.
Jones, Elwyn (Path)
Morten, D. H. (Path)
Myerscough, S. F. (Path)
Scarnell, John (Path)
Sinclair, K. B. (Path)
Watkins, I. M.

(Path) denotes credit in Pathology.

FINAL EXAMINATION:

Barker, I. R.	*Hignett, P. G.
Carus, Alexander.	*Holmes, J. R.
Craig, N.	Johnston, R. M.
Curtis, P. E.	Lees, Miss Peggy (M)
Davies, E. T.	*Llewellyn, D. G.
Davies, Ifor.	Murch, Oliver (M)
Evans, Oswyn.	Shepherd, Edward.
Green, L. H.	Walley, J. K. (M)
Haigh, Brian.	Wilding, M. H.

* denotes 2nd class honours.
M denotes credit in Medicine.

(To be continued)

QUESTIONS IN PARLIAMENT

DAIRY COWS (OVERSTOCKING)

Brigadier RAYNER asked the Minister of Agriculture if he is satisfied that everything possible is being done to put a stop to the cruel practice of over-stocking dairy cows prior to sales; and if he will consider, in co-operation with the cattle-breeding societies, a tightening-up of the regulations.

Mr. T. WILLIAMS: I deprecate the practice of exhibiting overstocked cows at markets, and my Department has always endeavoured to dissuade owners of animals from doing so. I have no power to make regulations, but it is an offence against the Protection of Animals Acts to cause unnecessary suffering to an animal and my veterinary officers are always ready to assist the police where cruelty is alleged to be due to over-stocking. I was glad to note that at a recent sale at Reading the organizers required cows in milk to be milked out at six o'clock on the morning of the sale, and I hope that requirements of this kind will become more general.

Brigadier RAYNER: Does the right hon. Gentleman realize that the great majority of farmers in South Devon and other parts of England also deprecate the practice, and will he not tighten up the regulations so that action can be taken against the minority?

Mr. WILLIAMS: I have no power to make regulations, and the question of cruelty is a matter for the police and my right hon. Friend the Home Secretary.

Mr. PAGET: Is my right hon. Friend aware that this practice is quite notorious all over England? Cannot he instruct his officers to bring prosecutions? They are entitled to do so.

Mr. WILLIAMS: No, Sir, not unless their intention is drawn to a particular case by the police. It is a question for the police and the Home Secretary, not for the Minister of Agriculture.

Major LEGGE-BOURKE: Will the right hon. Gentleman consider asking owners of sale yards to put into their catalogues the time at which cows can be milked before sale?

Mr. WILLIAMS: I hope that those responsible for sales will take note of the hon. and gallant Member's question.

NOTES AND NEWS

Diary of Events

July 22nd.—Meeting of the Southern Counties Division, N.V.M.A., at Brackendene, Burley, Nr. Ringwood, 2.30 p.m.

July 24th.—Meeting of the Royal Counties Division, N.V.M.A., at Marlborough, 10 a.m.

July 27th—Aug. 1st.—N.V.M.A. Annual Congress in Edinburgh.

July 29th.—Meeting of the Association of Veterinary Inspectors, at the Royal (Dick) Veterinary College, Edinburgh, 3.30 p.m.

July 31st.—12th Annual Meeting of the Royal (Dick) Veterinary College Alumnus Association, at the Royal British Hotel, Princes Street, 7 p.m.

July 31st.—Annual Meeting of the Association of Veterinary Teachers and Research Workers, at the Royal (Dick) Veterinary College, Edinburgh, 10.30 a.m.

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THE MINISTRY'S ADVERTISEMENT

Many of our readers looked forward, no doubt with a good deal of curiosity, to the Ministry's first announcement in our columns and they can now read for themselves all about the "special reconstruction competitions" for 140 "permanent and pensionable posts" in the Department.

Perhaps the most significant feature of the advertisement is the intimation that the upper age limit—40—with provision for added increments over the commencing salary is applicable only to this "reconstruction" competition. When normal recruitment is resumed (at some unspecified date), that age limit is to be reduced considerably and the number of added increments is to be drastically cut.

That means, obviously, that so great are the needs of the Animal Health Division that the Ministry is prepared to recruit older men forthwith in order to fill the many gaps in the Division. The parsimonious limitation of added increments is unexplained and it may well be that the resumption of normal recruitment will have to be deferred until the "special provisions" governing this competition have exhausted their attractiveness.

Our guess in that respect may be at fault. Quite frankly, we have no inside information about the policy underlying the advertisement and, so far as we know, the Ministry has issued no explanatory statement on the subject. Equally, we are at a loss to interpret authoritatively the term "special reconstruction competitions." It may be that the Animal Health Division is being vigorously overhauled or it may simply be that "reconstruction" connotes nothing more than a recruiting drive.

But whatever underlies the advertisement, the very fact that the Ministry is seeking to fill no fewer than 140 "permanent and pensionable posts" is the most eloquent vindication of the stand taken by the N.V.M.A. on behalf of veterinary civil servants that has come under our notice. The loss of skilled officers which has been proceeding year by year reflects, in the main, the dissatisfaction and disillusionment which, unhappily, exist in the Animal Health Division.

Would-be recruits to the State veterinary service must study for themselves the salary scales and conditions of employment which they are offered. They will know, from their reading of the pages of this journal, the view taken by their professional organization of these terms of service. They must exercise their own judgment in deciding whether or not to submit their applications in response to the Ministry's advertisement.

In concluding this note, we would refer readers to the N.V.M.A. Statement, regarding the advertisement, appearing on page 359 of this issue, and to the Resolution of the Special Meeting of Council, rejecting the Ministry's salary scale, together with Divisional Resolutions in support of Council's action, published on page 358.

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Scheme for the Control of Certain Diseases of Dairy Cattle in England and Wales

The Council of the National Veterinary Medical Association, after agreement with the National Farmers' Union and the Ministry of Agriculture, recommends that undertakings under the Scheme for the control of Certain Diseases of Dairy Cattle in England and Wales, which are due to lapse and which both parties are willing to renew on the basis of existing agreements, should be extended for a further twelve months, pending revision of the Scheme in the near future.

N.V.M.A. Congress in Edinburgh

There has now been distributed to members the N.V.M.A. 1947 Handbook concerning Congress and the Annual General Meeting, embodying full information relative to the Association, including the Register of Members, the Annual Report, the programme of Congress and other features; while the papers to be presented to Congress also have been circulated. Any member failing to receive these documents by the end of the week should inform the General Secretary.

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Delegates to Congress

We have pleasure in announcing the following additions to the lists, previously published, of delegates from other countries who have accepted invitations to attend Congress: Professor Anton Brandt, Veterinary School, Oslo, Norway, and Professor G. M. van der Plank, Veterinary School, Utrecht, Holland.

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As accommodation in Edinburgh is now very difficult to obtain, members still desirous of obtaining rooms for the Congress should get in touch immediately with the Honorary Local Secretary, Professor A. Robertson, Royal (Dick) Veterinary College, Edinburgh, 9.

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Demonstration Programme Correction.—With reference to the list of demonstrations at the Congress published in our last issue (page 347), No. 17, "Trichomoniasis, by Dr. E. L. Taylor," should read, "Trichomoniasis, by Mr. A. E. Pierce."

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Exchange of Correspondence between Children of French and English Veterinary Surgeons

In our issues of June 21st and 28th, intimating the inauguration of the above correspondence exchange scheme, interested readers were requested to get into touch, as soon as possible, with Monsieur P. E. Godechoux, Editor of *L'Action Vétérinaire*, who was hopeful of placing children in contact with one another sufficiently early to enable mutual holiday visits to be paid this summer, should the letter-writing lead to such a pleasing development.

We hear that a number of the children of French veterinary surgeons have written to Monsieur Godechoux at 98, Avenue de Suffren, Paris XVe, asking for an English correspondent, but that, thus far, only one letter—from a veterinary surgeon—has reached him from this side.

To avoid disappointment to the French children, who evidently are eager to participate, and also to Monsieur Godechoux, the initiator of the project, who has kindly undertaken to act as the medium in the first instance, for the purpose of the exchange, we earnestly hope that the response from British parents and/or their children will be both widespread and prompt.

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PERSONAL

The Royal College Honoured

The President of the Royal College of Veterinary Surgeons, Mr. Howard W. Dawes, with Mrs. Dawes, and Mr. W. G. R. Oates, the Secretary and Registrar, had the honour of invitation to His Majesty's first garden party at Buckingham Palace, on Thursday, July 10th.

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Honorary Veterinary Surgeons to the King

We congratulate Captain T. L. Wright, of Putney, who is the Honorary Secretary of the National Veterinary Medical Association, and Mr. E. S. Paterson, of Windsor, on the honour of royal appointment bestowed on them, as announced in *The London Gazette* of Tuesday of last week, in the following terms:—

Lord Chamberlain's Office,
*St. James's Palace, S.W.*1.
8th July, 1947.

The King has been graciously pleased to appoint Captain Thomas Lewis Wright, M.R.C.V.S., and Edmond Scott Paterson, Esquire, M.R.C.V.S., to be Honorary Veterinary Surgeons to His Majesty.

Veterinary Inspectorate Changes

Mr. F. A. Davidson, B.SC., M.R.C.V.S., Ministry of Agriculture Divisional Veterinary Inspector for Staffordshire, has been appointed to a similar post in Aberdeenshire, and will take up his duties this month.

Recording this appointment, the *Staffordshire Advertiser* states: "Mr. Davidson was educated at Dundee and at Edinburgh University, where his studies were interrupted by the first world war. After four years' service with the Royal Field Artillery, he returned to the university and graduated in 1921 M.R.C.V.S. and B.Sc. He then took up an appointment in Hong Kong, where he remained for three years and afterwards worked in French Indo-China and Canada. On his return to England Mr. Davidson joined the Ministry of Agriculture and helped to fight the foot-and-mouth disease outbreaks in Northumberland and Durham during 1923 and 1924. For the next two years he was assistant veterinary officer at Newcastle-on-Tyne, and from 1926 to 1934 was county veterinary officer for Dumfries-shire.

"Mr. Davidson began his association with Staffordshire when he was appointed chief county veterinary officer under the County Council in 1934, and four years later he took up his present appointment under the Ministry of Agriculture. Well known and popular in the county, Mr. Davidson has made important contributions to raising the standard of dairying in Staffordshire. When he took up his appointment under the County Council in 1934 there were only about 70 accredited herds in the county, while four years later there were approximately 3,000 out of a possible 6,000 herds."

Mr. Davidson is to be succeeded by Mr. A. L. F. Mullen, M.R.C.V.S., D.V.S.M., who is at present Divisional Veterinary Inspector for the North Riding of Yorkshire.

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Births.—Pearson.—On July 4th, 1947, at the Clarendon Nursing Home, Eccles, to Joan (*née* Whitby), wife of R. W. H. Pearson, M.R.C.V.S., a daughter.

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Marriage.—Fawcett—Moore.—On June 18th, 1947, at St. Mary's Church, Horsell, Woking, James Whitley Fawcett to Diana Marian Moore, M.R.C.V.S.

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A West Country Veterinary Surgeon's Mayoral Speeches.—The record of municipal work—culminating in a year as sheriff, six years as mayor and a year as deputy-mayor—which stands to the credit of Mr. R. Glave Saunders, M.R.C.V.S., of Exeter, is probably without parallel amongst members of our profession. For this reason, and also because Mr. Saunders's enthusiasms cover an even wider range which is reflected in them, we welcome the well-printed collection of extracts from his speeches, "Things I Have Said" (1935–1945). His experiences and utterances as chief citizen during the war years make good reading, while much interest and profit resides in his historical and cultural contributions and in those dealing with municipal, social and humanitarian problems.

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R.C.V.S. OBITUARY

Logan, William, O.B.E., T.D., Major R.A.V.C. (T.F.) (retd.), Suddie House, Munlochy, Ross-shire. Graduated Glasgow, December 23rd, 1890. Died February 6th, 1947.

Major William Logan

In connection with the death of Major William Logan, which we record above with much regret, *The Ross-shire Journal* observes that his passing will be mourned by his many friends and acquaintances all over the Northern Highlands and beyond. The *Journal* adds that Major Logan, who retired a few years ago, was not only a veterinary surgeon of wide professional experience, but a noted breeder and improver of Highland ponies. An officer of the Lovat Scouts, he was responsible for the mounts of the first contingents to go on active service. The tribute concludes: "To a pleasant personality, he added frank courtesy and enjoyed popularity among his professional brethren." Mrs. Logan died some years ago.

Welfare, Louis Charles, "Blacklands," Willow Grove, Chislehurst, Kent. Graduated London, December 16th, 1890. Died July 3rd, 1947.

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Discussions have taken place between the Ministry of Health, the Society of Dairy Technology, and the milk distributive trade concerning the establishment of a Dairy Technological Institute. The Ministry, however, have intimated that the scheme as planned—for a new building at Reading University—could not be carried out for at least five years.

IMPORTATION OF POULTRY: NEW ORDER

In order more effectively to prevent the introduction into this country from abroad of contagious poultry diseases, the Minister of Agriculture and Fisheries has made a new Order controlling the importation of poultry (including day-old chicks) and hatching eggs. The Order places no restrictions on importation from Northern Ireland, Eire, the Channel Islands and the Isle of Man, allows importation from Australia, Canada, New Zealand, the Union of South Africa, Norway and Sweden, under conditions laid down in the Order, but prohibits absolutely importation from all other countries.

Persons wishing to import poultry or hatching eggs from one of the self-governing Dominions or from Norway or Sweden should obtain a copy of the new Order, the Poultry and Hatching Eggs (Importation) Order of 1947. The Order comes into force on August 15th. Copies of it may be obtained from the Ministry of Agriculture and Fisheries, 99, Gresham Street (first floor), London, E.C.2.

The Order applies to domestic fowls, turkeys, geese, ducks of any sort, pheasants, guinea-fowl and partridges.

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SCHEME FOR THE CONTROL OF DISEASES OF DAIRY CATTLE

STATEMENT SHOWING THE NUMBER OF UNDERTAKINGS NOTIFIED TO THE MINISTRY OF AGRICULTURE DURING THE MONTH ENDED JUNE 30TH, 1947

County	Undertakings Notified		Total Undertakings		
	During Month	Previously	Number	Number of Cattle	
				Cows	Heifers
ENGLAND					
Bedford	—	10	10	194	126
Berks	3	45	48	1,557	1,083
Bucks	—	29	29	760	740
Cambridge	—	—	—	—	—
Cheshire	5	138	143	4,931	2,003
Cornwall	—	—	—	—	—
Cumberland	—	9	9	387	304
Derby	2	221	223	6,390	3,644
Devon	—	134	134	1,897	1,325
Dorset	—	11	11	352	147
Durham	1	161	162	3,447	1,436
Essex	—	102	102	3,601	2,699
Gloucester	—	31	31	1,045	846
Hampshire	5	152	157	5,033	3,175
Hereford	—	5	5	163	137
Hertford	—	27	27	885	563
Hunts	—	—	—	—	—
Isle of Ely	—	—	—	—	—
Isle of Wight	—	—	—	—	—
Kent	5	69	74	1,640	1,160
Lancs	1	85	86	2,613	1,064
Leics	2	60	62	1,606	1,310
Lincs (Holland)	—	—	—	—	—
Lincs (Kesteven)	—	13	13	166	141
Lincs (Lindsey)	—	14	14	419	425
Middlesex	—	2	2	34	25
Norfolk	—	56	56	1,799	1,310
Northants	—	25	25	628	641
Northumberland	1	36	37	1,210	809
Notts	3	110	113	2,664	1,522
Oxford	—	11	11	265	236
Rutland	—	1	1	24	12
Salop	1	60	61	1,984	1,151
Soke of Peterborough	—	—	—	—	—
Somerset	—	94	94	2,370	1,509
Staffs	2	98	100	2,928	1,962
Suffolk (East)	—	26	26	538	388
Suffolk (West)	—	24	24	488	425
Surrey	—	48	48	1,300	830
Sussex (East)	7	53	60	1,844	1,302
Sussex (West)	1	36	37	1,182	723
Warwick	1	66	67	1,674	1,281
Westmorland	—	3	3	51	21
Wilts	1	36	37	1,400	969
Worcester	1	78	79	1,533	868
Yorks (E.R.)	—	47	47	807	609
Yorks (N.R.)	—	57	57	1,259	875
Yorks (W.R.)	—	110	110	2,669	1,300
WALES					
Anglesey	—	10	10	161	115
Brecon	—	5	5	99	68
Caernarvon	2	25	27	488	213
Cardigan	—	29	29	599	406
Carmarthen	3	144	147	2,886	1,534
Denbigh	—	11	11	213	108
Flint	—	26	26	625	325
Glamorgan	—	35	35	559	288
Merioneth	—	6	6	93	31
Monmouth	—	8	8	165	123
Montgomery	—	1	1	6	—
Pembroke	—	7	7	197	235
Radnor	—	1	1	4	—
TOTALS	47	2,701	2,748	71,832	44,442

Notes.—(1) Operative periods of undertakings: 1 year, 754; 2 years, 168; 3 years, 1,826. (2) Undertakings renewed for further periods: 1 year, 13; 2 years, —; 3 years, 7. (3) Undertakings not renewed at end of operative periods, 115. (4) The figures showing the number of undertakings notified during the month relate to entirely fresh undertakings and do not include undertakings renewed for further periods. Undertakings which have been cancelled or not renewed are not included in the figures for previous notifications.

County	Undertakings Notified		Total Undertakings		
	During month	Previously	Number	Number of Cattle	
				Cows	Heifers
SCOTLAND					
Aberdeen	—	17	17	891	381
Angus	—	13	13	540	345
Argyll	—	—	—	—	—
Ayr	—	10	10	350	222
Banff	—	1	1	120	20
Berwick	—	1	1	22	7
Bute	—	—	—	—	—
Caithness	—	—	—	—	—
Clackmannan	—	1	1	19	14
Dumfries	—	12	12	617	564
Dunbarton	—	—	—	—	—
East Lothian	—	1	1	20	8
Fife	—	21	21	666	460
Inverness	—	1	1	47	20
Kincardine	—	1	1	40	55
Kinross	—	3	3	60	43
Kirkcudbright	—	5	5	733	601
Lanark	—	6	6	274	185
Midlothian	—	—	—	—	—
Moray	—	—	—	—	—
Nairn	—	—	—	—	—
Orkney	—	—	—	—	—
Peebles	—	—	—	—	—
Perth	—	9	9	274	214
Renfrew	—	4	4	151	101
Ross-shire	—	3	3	130	62
Roxburgh	—	—	—	—	—
Selkirk	—	—	—	—	—
Stirling	—	7	7	254	219
Sutherland	—	4	4	85	39
West Lothian	—	2	2	75	22
Wigtown	—	15	15	1,247	708
Zetland	—	—	—	—	—
TOTALS	—	137	137	6,615	4,290

Notes.—(1) Duration of undertakings: 1 year, 40; 2 years, 6; 3 years, 91. (2) Undertakings renewed for a further period (included in column 2 of statement): 1 year, 118; 2 years, 9; 3 years, 1. (3) Undertakings expired and not renewed (not included in column 2 of statement): 262. (4) The figures showing the number of undertakings notified during the month relate to entirely fresh undertakings.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

SHEEP SCAB:

Merioneth.—Tynyfach, Llandrillo, Merioneth (July 7th); Cilan, Llandrillo, Merioneth (July 7th).

Montgomery.—Tynffynonydd, Llangynog, Montgomery (July 7th); Tanygraig Farm, Llanrhaiadr ym Mochnant, Montgomery (July 7th).

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VETERINARY NEEDS OF WALES

Apropos the account, recently appearing in its columns, of a day in a life of a country veterinary surgeon, *The Countryman* reproduces the following letter from a Welsh farmer: "Thousands of farmers and smallholders have no practising veterinary surgeon to aid them in any emergency, even though most country practitioners are tireless in meeting claims on their time, day or night, and are ready to make charges as low as possible to any client who is in a humble way of life. Unhappily an increase in the number of veterinary surgeons would not entirely meet the case, since there would be no guarantee of their fair distribution. Who can blame the newly qualified man for not settling in some outlandish place, where the work will be hardest and least remunerative, simply to meet the country's need, even if this has been explained to him? Yet it is in such districts that a vet., coming new to the neighbourhood, would be most welcome. County W.A.E.C.s have done grand work in ensuring for the off-the-map farmer his due share of attention. Without adequate veterinary assistance, newcomers to farming will stand small chance at the outset. Sheer common sense and quickness to profit by experience may help with minor ailments, but sickness, accident or sudden trouble at or after calving or farrowing are another matter. Too often a man's plight is only aggravated by acting upon ready-to-hand advice based on ignorance; many 'cures' and 'treatments' are about as reliable as were those primitive forms of witchcraft to which, at times, their origin can be traced. The State might profitably grant free veterinary service to certain classes of smallholder. Alternatively an 'all-in' panel scheme, on a contributory basis, would make the small man's share of the financial burden a trifling one, suited to his purse."

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For the first time, dog food (canned) is now available bearing a U.S. Department of Agriculture inspection label, certifying the product as a "normal maintenance food." The regulations applying to permissive inspection are rigid.—*Vet. Med.*

H.M. STATIONERY OFFICE PUBLICATIONS

The undermentioned have been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office.

	Price net s. d.	Post free s. d.
COMMAND PAPERS (SESSION 1946-47):		
7151. Colonial Research, 1946-47. I.—Colonial Research Committee Fourth Annual Report. II.—Colonial Products Research Council Fourth Annual Report. III.—Colonial Social Science Research Council Third Annual Report. IV.—Colonial Medical Research Committee Second Annual Report. V.—Committee for Colonial Agricultural, Animal Health and Forestry Research Second Annual Report	1 3	1 5

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WHALE MEAT PROSPECTS

"World meat production is unlikely to reach consumer demand for at least ten years, and the only possible source of a rapid increased supply is from the sea. This," says the *Meat Trades Journal*, "is the view expressed by Mr. W. J. Brewster, managing director of the Smithfield and Argentine Meat Co., Ltd., who feels that there are great possibilities from the development of whaling ships. He estimates that in the space of two years, given full facilities, 100,000 tons of whale meat could be secured. The experimental ship *Balaena* brought back from the Antarctic 50 tons of whale meat, which is being distributed by S. and A., and we understand the project was not only highly successful from the point of view of the quantity of whale oil secured, but on present very high prices will, after paying the cost of the voyage and the boat, show a very substantial profit. Our Government should see to it that no time is lost in building or converting an adequate number of boats ready for the next whaling season. Indications are that other countries are fully aware of the valuable potentialities of the whale."

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MINISTRY OF AGRICULTURE NEWS SERVICE

Sheep Dipping.—The warmth and humidity of the fleece, the concealing entanglements of the wool fibres, make a secure and congenial [illegible] parasites. By far the worst external parasite is the mite causing scab in sheep. And it was against this pest that the dipping of sheep and the legislation enforcing it was originally designed. The adult mite is fairly easily destroyed by a variety of chemical agents—the arsenical dips (commonly called poisonous) and the carbolic dips (commonly called non-poisonous) still being those most commonly used. As might be expected, the eggs of the mite are much more resistant. That is the reason for the double-dipping order imposed in areas where actual outbreaks of scab have been confirmed. The first dipping kills the mites, the second dipping kills the mites that have hatched out between dippings, before they, in turn, have had time to lay new eggs.

It follows, theoretically, that it should be possible to eliminate scab entirely from the sheep flocks of any country. This has been done successfully in some countries, Australia and New Zealand for example. But so far it has not been successful in Britain. That is due neither to any specially resistant properties of the sheep scab mite in Britain, nor to any ineffectiveness of the dips used here. It is due to incomplete gathering of mountain flocks for dipping and to inefficient dipping.

There are others almost as bad and less easily controlled. Of these the sheep maggot fly is by far the worst. The usual arsenical and carbolic dips give considerable protection, but it is not really lasting. With sulphur in them they give more. The newer insecticides are still more promising, not only against maggot fly but against sheep ticks as well. But, here again, the gathering and actual dipping of the sheep must be thorough. The complete gathering in of the flock is what matters most; then thorough immersion of the sheep and complete soaking of the fleece. Careless and too rapid dipping is a waste of money and dip, and, defeating its main object, a waste of time as well.

Tuberculosis (Attested Herds) Schemes

The number of Attested Herds, *i.e.*, herds officially certified as free from Tuberculosis as at June 30th, 1947, was as follows :—

ENGLAND	WALES	SCOTLAND	TOTAL (GREAT BRITAIN)
8,129	10,630	8,990	27,749

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents should write as briefly as possible and letters should not exceed 350 words.

SUPERFECUNDATION

Sir,—In recent issues of the *Record* I have noticed letters on the subject of superfecundation. In this connection, the following, which I encountered the other day, may be of interest to readers. I was shown by a client twin calves born about six weeks ago to a pure-bred Dairy Shorthorn heifer. This heifer had been running in a field with an Aberdeen-Angus bull but was never seen to be served by him. She was taken out of the field and three days later was served by a pure-bred Shorthorn bull.

One calf is a typical black poll whilst the other is a roan with horn buds. I think there can be no doubt that one calf has been sired by the Aberdeen-Angus and the other by the Shorthorn.

Yours faithfully,

56, Newgate Street, Morpeth, Northumberland. W. LANG, M.R.C.V.S.

July 3rd, 1947.

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NEED FOR A PROFESSIONAL STANDARD FOR CANINE NURSES

Sir,—It is with pleasure, and not a little admiration, that I have read Miss Joergen's letter in *The Veterinary Record* of July 5th, 1947.

I should like to congratulate her on her ability to paint so accurate a picture of the present unsatisfactory position with regard to canine nurses, and on her courage in publishing it over her name.

Personally, I am in complete agreement with all she says and will gladly support any effort to bring about the reforms she advocates. The Veterinary Educational Trust has, from the first, recognized the necessity of training canine nurses, for the care and treatment of their own dogs at the Research Centre. Subject to the agreement of the Council of the Trust and of the various veterinary authorities concerned, I see no reason why this training could not be extended to provide veterinary surgeons with properly qualified nurses. Should this scheme take shape it will, of course, entail the formation of a recognized Canine Nursing Association, subject to the authority of a responsible body such as the Royal College of Veterinary Surgeons. Once this has been achieved and canine nursing is included amongst the professions, there is no doubt in my mind that we shall get more of the right type of girl, with the required standard of education, entering upon this career.

Yours faithfully,

101, Bromley Road, Shortlands, Kent. S. F. J. HODGMAN.

July 11th, 1947.

DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT, 1937 (PART IV).

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Parasitic Mange*	Sheep Scab	Swine Fever
June 16th to 30th, 1947	3	6	92	—	2	1
Corresponding period in—						
1946	2	2	—	—	2	10
1945	2	6	—	—	2	19
1944	4	5	—	—	2	59
Jan. 1st to June 30th, '47	47	98	542	1	25	16
Corresponding period in—						
1946	51	28	—	4	36	275
1945	54	85	—	5	40	508
1944	111	27	—	6	61	418

NOTE.—The figures for the current year are approximate only.
* Excluding outbreaks in Army Horses.